

**SOME ADDITIONS TO THE ACARINA-MESOSTIGMATA
OF AUSTRALIA**

By H. WOMERSLEY*

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SUMMARY

In the present paper a number of genera and species of mites belonging to the Mesostigmata, mostly new, are described or recorded from Australia. They were mainly from Queensland from soil litter and were largely collected by Dr. E. H. Derrick, to whom I am greatly indebted for the opportunity of studying and describing them. The types are in the South Australian Museum collections and where possible some paratypes in the Queensland Institute for Medical Research.

List of Genera and Species:

Family Macrochelidae

Euepicrius queenslandicus sp. nov.

Family Parasitidae

Pergamasus primitivus Ouds.

Family Pseudoparasitidae

Ouchogamasus communis g. et sp. nov.

Family Neoparasitidae

Queenslandolaelaps vitzthumi g. et sp. nov.

Queenslandolaelaps berlesei sp. nov.

Antennolaelaps affinis g. et sp. nov.

Stylogamasus convexa g. et sp. nov.

Family Iaelaptidae

Subfamily Hypoaspidinae

Coleolaelaps heteronychus sp. nov.

Subfamily Phytoseiinae

Primoseius macauleyi (Hughes) g. nov.

Typhlodromus cucumeris Ouds.

Subfamily Podocininae

Derrickia setosa Wom.

Family MACROCHELIDAE Vitzthum

Vitzthum, Graf H., 1930. Zool. Jahrb., Abt. f. Systematik, Bd. 59.

Genus EUEPICRIUS Womersley

Womersley, H., 1942. Trans. Roy. Soc. S. Aust., 66 (2): 170 (Type *Euepicrius filamentosus* Wom.).

This genus and species were erected for specimens collected in moss from the vicinity of Adelaide, South Australia, in 1938, while a single female was recorded at the same time from Waimainaku, New Zealand.

* Acarologist, South Australian Museum.

In the long and slender first legs and general form the genus shows a superficial resemblance to *Epicrius* (Epicriidae), but differs in the absence of claws and caruncle on the first legs, the presence of a distinct peritremæ, a 3-tined seta on the palpal tarsus and in the structure of the ventral shields.

The following new species was isolated by Mr. Robert Domrow from litter collected by Dr. E. H. Derrick at Brookfield, near Brisbane, between May and July, 1949.

Euepicrius queenslandicus sp. nov.

Fig. 1, A-1

Description: Female Holotype—A small and lightly chitinised species of rotund form. Length of idiosoma 352μ , width 240μ . Dorsal shield lightly rugose, divided as figured, the anterior part the longer and furnished with 17 pairs of setae, the vertical pair 34μ long, stout ciliated and arising from strong tubercles, the second pair each lateral of the verticals to 20μ and also on tubercles but plain and slender, the other setae to 30μ plain, slender and tapering; the posterior portion of the dorsal shield with 14 pairs and 4 median setae of which the posterior pair are 39μ long, stout, blunt and ciliated, the others are long, slender, plain and slightly filamentous, to 32μ , being shorter and less filamentous than in *filamentosus*. Venter: tritosternum normal; no pre-endopodal shields; sternal shield about as wide as long medially, laterally extending to between coxae III and IV, with 4 pairs of setae and 2 pairs of pores, anterior margin sinuous, posterior margin deeply excavate; genital shield as wide basally as long, with one pair of setae, posterior margin truncate and only narrowly separated from ventri-anal shield; ventri-anal shield extending across opisthosoma, with 9 pairs of setae besides the paranals, the 3 lateral on each side long, fine and filamentous, to 70μ long, the posterior pair to 48μ long, thick and ciliated, the others short, plain and tapering to 22μ , the paranal setae short and subequal; the peritremal tube is lightly corrugated and the stigma lies between coxae III and IV, the shield extends backwards to just beyond coxae IV, while the tube anteriorly crosses over to the dorsum at the level of coxae II; behind coxae IV there is a fine suture line where the dorsal shield coalesces with the ventri-anal shield. Leg I 592μ long, slender and tactile, tarsus without caruncle or claws, but with long and fine tactile setae; II-IV stouter with caruncles and claws, II 313μ , III 288μ , IV 378μ . Chelicerae as figured, fixed finger with 5 or 6 small, blunt teeth, movable finger with 4 teeth. Tectum as figured, variable, with median mucro and lateral points between which on each side are two smaller points.

Male Allotype—Facies as in female. Length of idiosoma 352μ , width 196μ . Legs: I 528μ long, II 320μ , III 304μ , IV 352μ ; femur of leg II with strong, hooked apophysis as figured and a small tubercle on the genu. Venter: sternal, metasternal and genital shields coalesced, with 5 pairs of setae and 2 pairs of pores; ventri-anal shield as in female. Chelicerae as figured, fixed finger with three smallish teeth, movable finger with one strong tooth and a long, slender spermatophore carrier which is as long again as the finger and is slightly swollen at the tip. Tectum variable as in female.

Remarks—This species is somewhat smaller than *filamentosus* and differs in lacking the very long, whip-like filamentous setae on the dorsum and on the ventri-anal shield, except for the three lateral pairs. The dorsal setae are otherwise short and simple as are the other ventri-anal setae. The chelicerae, tectum and leg II of the male are similar to those of *filamentosus*.

The holotype female and allotype male and several paratypes are in the collection of the South Australian Museum and two paratypes in the Queensland Institute for Medical Research.

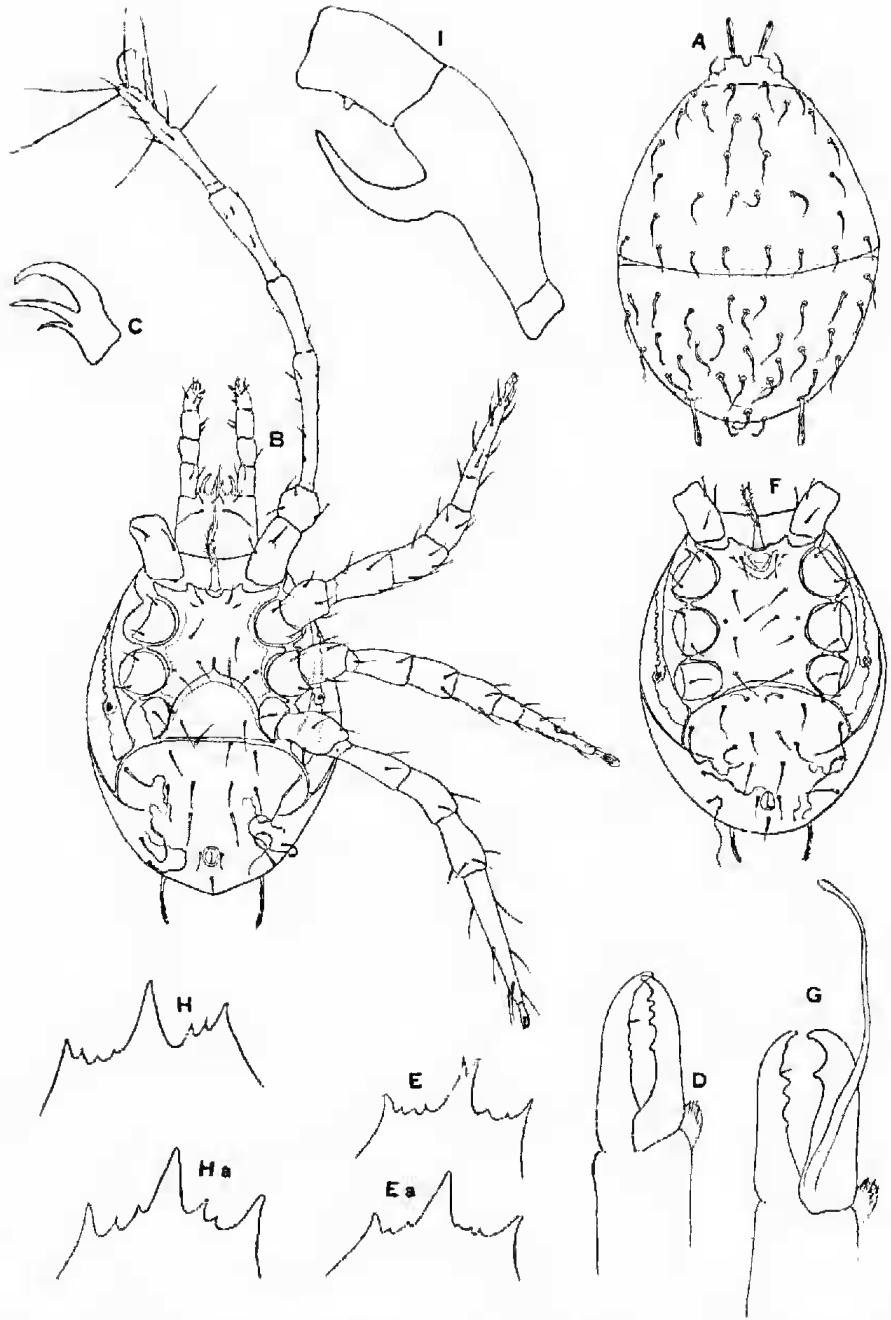


Fig. 1 A-I—*Euepicrius queenslandicus* sp. nov. A-E Female: A. dorsum, B. venter, C. specialised seta on palpal tarsus, D. chelicerae, E. two views of tectum; F-H Male: F. venter, G. chelicerae, H. two views of tectum, I. apophysis on femur of leg II.

Family PARASITIDAE Oudemans

Oudemans, A. G., 1901. Notes on Acari; Third Series. Tijdschr. ned. dierk Ver. (2), 111, No. 2: 59.

Genus PERGAMASUS Berlese

Berlese, A., 1903. Redia 1: 235 (Type *Acaris crassipes* Linn. 1759).

Pergamasus primitivus (Ouds)

Fig. 2 A-I

Parasitus primitivus Oudemans, 1904. Entom. Ber., 1: 140.

Gamasus effeminatus Berlese, 1905. "Acari nuovi," Manipl. IV, Redia 2: 165.

Gamasus (Pergamasus) effeminatus Berlese, 1906. Mon. d. Gamasus, Redia 3: 193-201.

Gamasus primitivus Vitzthum, 1926. Treubia 8: 3.

This species was originally described by Oudemans from Brazil, and later recorded by Berlese from Java. Berlese was unable to find other than insignificant differences between the Javanese and Brazilian specimens. In 1926 Vitzthum recorded it from Batavia and Tjibodes.

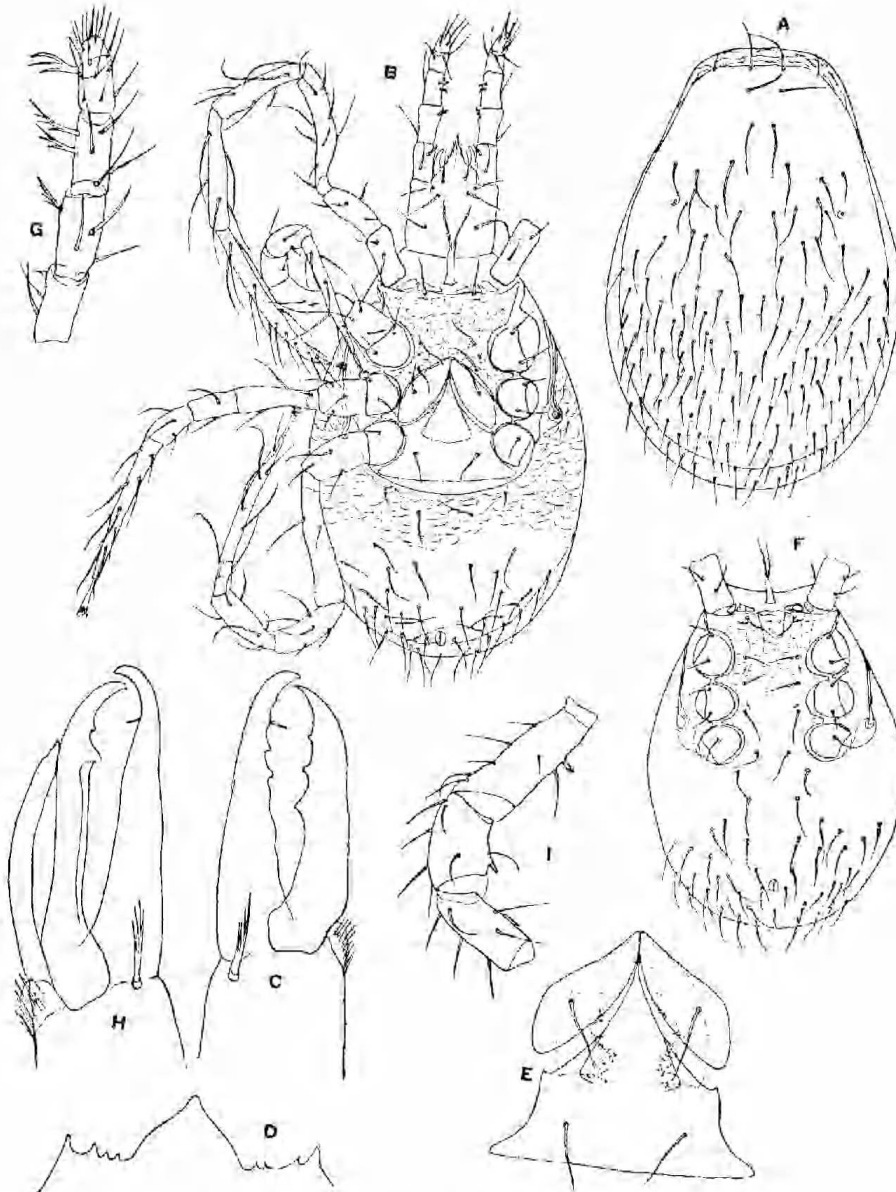


Fig. 2 A-I—*Pergamasus primitivus* (Ouds). A-E Female: A. dorsum, B. ventral view, C. chelicerae, D. tectum, E. genitalia; F-I Male: F. venter, G. palp, H. chelicerae, I. femur genu and tibia of leg I.

A series of specimens of both sexes were obtained from litter from Brookfield, Queensland, 11th June, 1949 (coll. E. H. Derrick). Figures drawn from this Australian material are now given.

Family PSEUDOPARASITIDAE Vitzthum

Vitzthum, Graf II., 1941. In Bronn's Tierreich, 5, Acarina: 757.

Genus ONCHOGAMASUS NOV.

Pseudoparasitidae. Dorsal shield entire with fine punctate reticulations, only slightly and narrowly underlapping the venter. Pre-endopodal shields present. Sternal and metasternal shields coalesced, sternal deeply incised posteriorly. Ventri-anal shield only moderately expanded behind coxae IV. Tectum spike-like. Labial cornicles 2-segmented, the apical being small and cone-like and inserted into apex of basal. Tarsi of leg II with three strong accessory claw-like spines.

Genotype *Onchogamasus communis* sp. nov.

Onchogamasus communis sp. nov.

Fig. 3 A-G

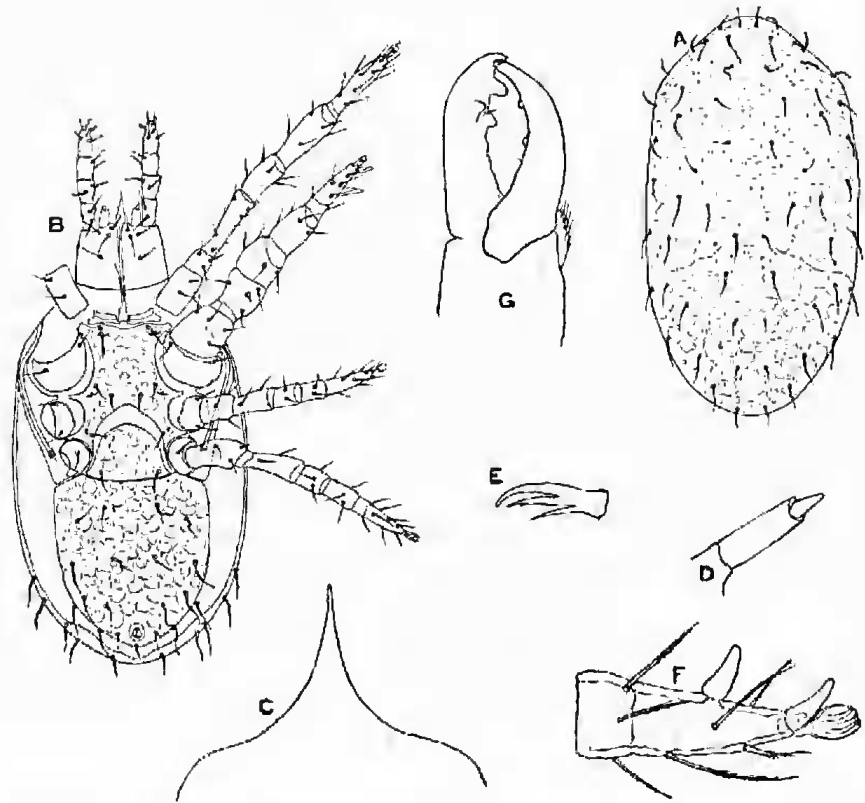


Fig. 3 A-G.—*Onchogamasus communis* g. et sp. nov. Female: A, dorsum, B, ventral view, C, tectum, D, labial cornicle, E, specialised seta of palpal tarsus, F, tarsus I, G, chelicerae.

Description: Female Holotype—Shape of body ovoid. Length of idiosoma 559μ , width 338μ . Dorsal shield with punctate reticulations, narrowly underlapping the venter laterally and posteriorly, furnished with 30 pairs of setae to 45μ long which, except for the verticals and laterals, are simple, the verticals

and laterals being slightly ciliated. Venter: tritosternum normal; a pair of pre-endopodal shields present; sternal and metasternal shields coalesced, longer than wide, with four pairs of setae of which the first pair are ciliated, the others simple, with three pairs of pores, posterior margin deeply incised; genital shield as wide posteriorly as long with a pair of short, simple setae, posterior margin only just separated from ventri-anal shield; ventri-anal shield longer than wide with 6 pairs of ciliated setae to 45μ long; all three ventral shields strongly reticulated; peritremal shields fused with exopodal shields, the peritremal tube runs forward from the stigma between coxae III and IV to between coxae I and II, where it overlaps slightly on to the dorsum. Legs short, I, III and IV slender, II much thicker and stronger and furnished on femur with a short, stout spine and on tarsus with three strong claw-like accessory spines, leg I 416μ long, II 364μ , III 260μ , IV 364μ , all with caruncle and paired claws. Chelicerae as figured, fixed finger with three strong, blunt teeth, movable finger with two small, blunt teeth. Tectum as figured with a median spine-like muero. Specialised seta on palpal tarsus 3-tined. Labial cornicles peculiar, 2-segmented, the apical being small, cone-like and inserted into the basal.

Locality—One single female, the holotype, from soil debris, Brookfield, Queensland, 21st May to 2nd June, 1949 (coll. E. H. Derrick). The type in the South Australian Museum.

Family NEOPARASITIDAE Oudemans

Oudemans, A. C., 1939. *Zool. Anz.* 128 (1-2): 21.

Genus QUEENSLANDOLAEIAPS NOV.

Neoparasitidae with the tectum trident-like, the median line or muero arising from below. Tarsi of leg I with paired claws and short caruncle. Dorsal shield entire. In female sternal and metasternal shields more or less coalesced. Pre-endopodal shields present. In male with a strong apophysis on femur of leg IV and a long whip-like spermatophore carrier on movable finger of chelicerae.

Genotype *Queenslandolaelaps vitzthumi* sp. nov.

Queenslandolaelaps vitzthumi sp. nov.

Fig. 4 A-H

Description: Female Holotype—Shape oval, but the sides rather parallel. Length of idiosoma 585μ , width 338μ . Lightly chitinised. Dorsal shield as figured, not entirely covering dorsum, lightly reticulate, with 38 pairs of setae to 52μ long and simple, except the posterior and postero-laterals, which are lightly ciliated. Venter: tritosternum present and normal; a pair of transverse pre-endopodal shields present; sternal and metasternal shields coalesced, the whole longer than wide laterally where it extends to between coxae III and IV, with deeply incised posterior margin, with four pairs of setae and two pairs of pores, the third pair of sternal setae are situated submedially; genital shield as wide basally as long, with only one pair of setae, posterior margin straight and only slightly separated from the anterior margin of the ventri-anal shield, anterior margin rounded; ventri-anal shield about twice as wide where it is expanded behind coxae IV, laterally and posteriorly rounded, with 7 pairs of setae in addition to the paranals; peritremal shields coalesced with the exopodal shields and extending only slightly past coxae IV to the shoulders of the ventri-anal shield; stigma lying between coxae III and IV and the peritremal tube running forwards to coxae I. Legs not longer than body and not excessively thick; I 572μ long, II 429μ , III 338μ , IV 496μ , all tarsi with short caruncle and paired claws, no special armature on coxae or on leg II. Chelicerae as figured, fixed finger with two large basal teeth and four smaller teeth before the apex,

movable finger with three teeth. Tectum peculiar and suggestive of the Veigaiaidae, trident-like with the median tine twice as long as the laterals and apparently arising from below, all three tines expanded and denticulate apically.

Male Allotype—General facies as in female. Length of idiosoma 546 μ , width 325 μ . Dorsum as in female. Venter: tritosternum and pre-endopodal shields as in female; sternal, metasternal and genital shields coalesced and narrowly separated from ventri-anal shield, with 5 pairs of setae; ventri-anal and peritremal shields as in female. Legs as in female, except that II has a

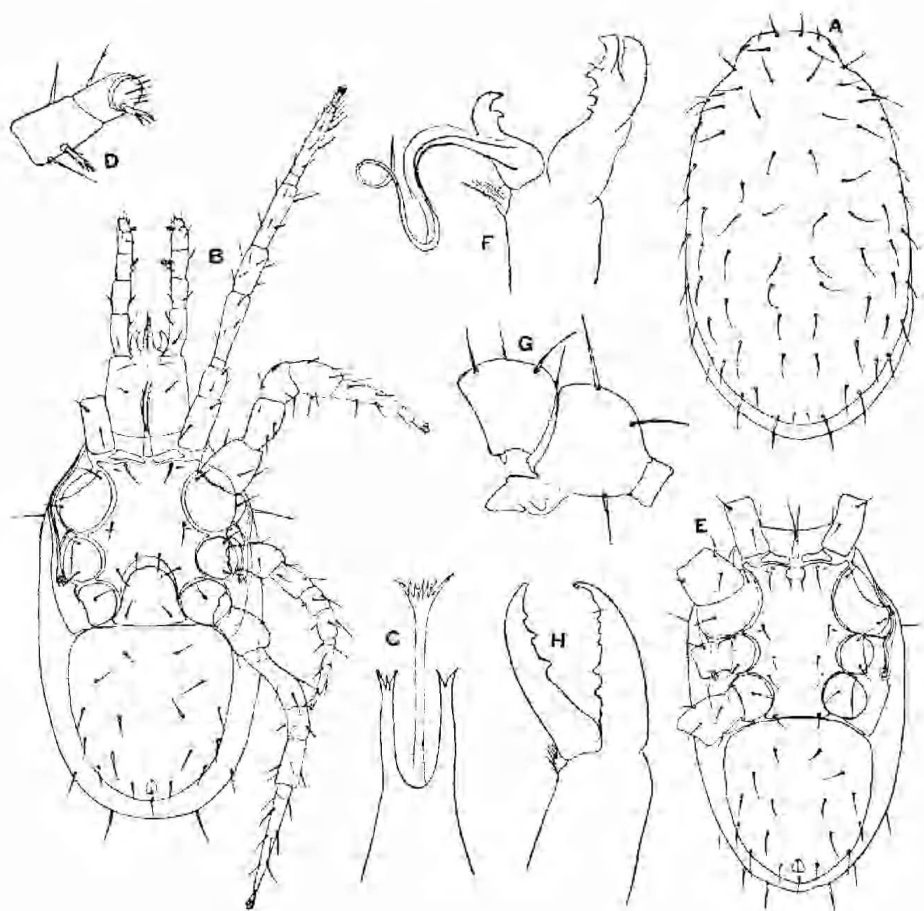


Fig. 4 A-H—*Queenslandolaclaps vitzthumi* g. et sp. nov. A-D, and H Female: A. dorsum, B. ventral view, C. tectum, D. tip of palp, H. chelicerae; E-G Male: E. venter, F. chelicerae, G. femur and genu of leg I.

strong apophysis on the femur and a small tubercular process on the genu, I 559 μ long, II 403 μ , III 338 μ , IV 520 μ . Chelicerae as figured; fixed finger twice as long as movable finger, thick and stout to apex which is longitudinally split with three strong inner teeth; movable finger short with one strong tooth and a long, curled, whip-like spermatophore carrier. Tectum as in female.

Locality—The female holotype, the male allotype and one paratype male from soil debris, Brookfield, Queensland, 31st May to 10th June, 1949 (coll. E. H. Derrick). In the South Australian Museum collection.

Remarks—In having a 3-tined seta on the palpal tarsus this genus belongs to the Neoparasitidae, although in the peculiar structure of the tectum it bears

some resemblance to the Veigaiidae in which the palpal seta is 4-tined and the dorsal shield incised laterally.

Beside the genotype the genus will also contain the following species, also from Queensland.

Queenslandolaelaps berlesei sp. nov.

Fig. 5 A-D

Description: Female Holotype—Shape oval, sides gradually curving inwards at about one-third from the front. Moderately well chitinised. Length of idiosoma 578μ , width 380μ . Dorsal shield entire, covering all the dorsum, strongly reticulate with imbricate markings, with 34 pairs of slender ciliated and flagellate setae to 104μ long. Venter: tritosternum and a pair of pre-endopodal transverse shields present; sternal and metasternal shields coalesced,

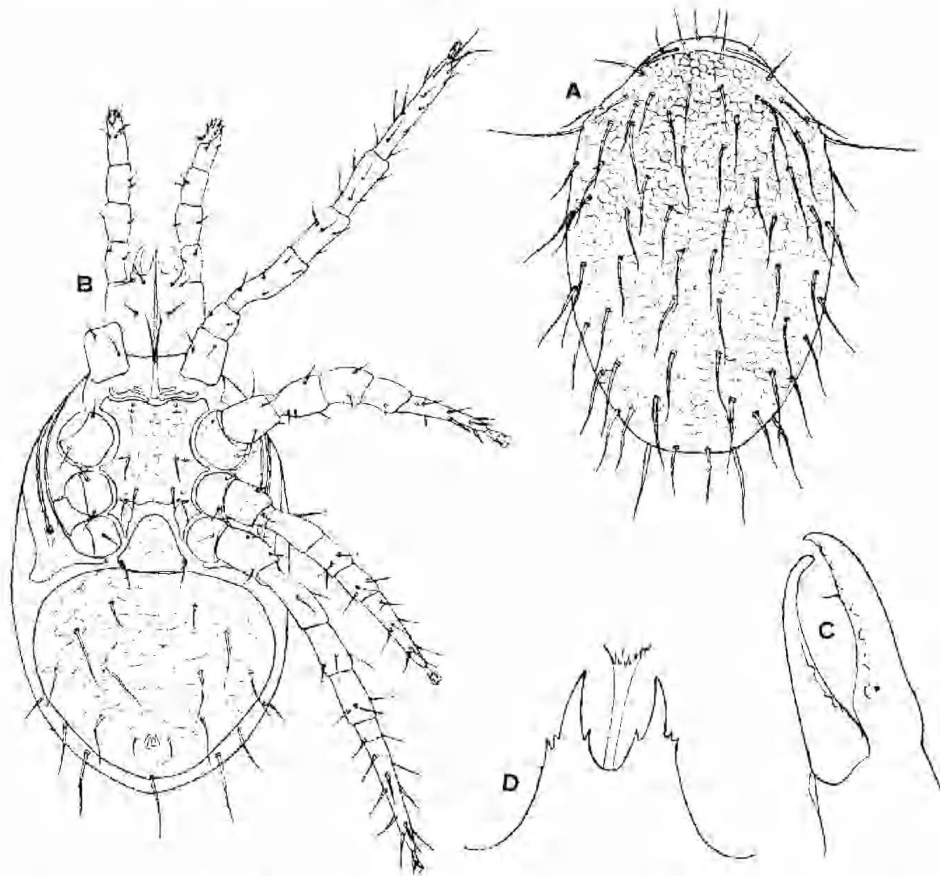


Fig. 5 A-D—*Queenslandolaelaps berlesei* sp. nov. Female: A. dorsum, B. ventral view, C. chelicerae, D. tectum.

although the metasternals are only narrowly joined to the sternal (see Fig. 5 B) and the metasternal setae are on the sternal portion; sternal shield reticulate; genital shield as wide basally as long, with straight posterior and rounded anterior margin, with one pair of setae; ventri-anal shield as wide as long and covering most of the opisthosoma, with light imbricate markings, with 5 pairs of long setae besides the paranals, the adanal setae very short compared with the postanal; peritremal shield not coalesced with the exopodal, rather broadly expanded just behind coxae IV, stigma between coxae III and IV. Legs not

excessively thick, unarmed, all tarsi with short caruncle and paired claws, I 520 μ long, II 390 μ , III 361 μ and IV 533 μ . Chelicerae as figured, fixed finger with 7 blunt teeth, movable finger with two. Tectum peculiar, trident-like with the median tine only slightly longer than the laterals, arising from below and with its apex expanded and denticulate, the lateral tines are dissimilar to the median and are cone-like with one inner and two outer small teeth. Seta on palpal tarsus 3-tined.

Male—Unknown.

Locality—Described from a solitary specimen, the holotype, from soil debris from Brookfield, Queensland, between 31st May and 10th June, 1949 (coll. E. H. Derrick). In the South Australian Museum.

Remarks—In the structure of the tectum and the ventral shields this species is closely related to the preceding and clearly belongs to the same genus. From *vitzthumi* it differs in the structure of the tectum, the dentition of the movable finger of the chelicerae, the narrow bridge uniting the sternal and metasternal shields, the wider separation of the third pair of sternal setae, the much wider ventri-anal shield, the more intricate reticulations on the dorsum and the much longer dorsal setae.

GENUS ANTENNOLAEIAPS NOV.

Neoparasitidae. Male. Oval and strongly chitinised. Legs long and slender, especially I, which is tactile without caruncle and claws, II-IV with these. Dorsal shield entire and underlapping on to venter from level of coxae II backwards, but not fused with ventral shields. Pre-endopodal shields distinct, sternal, metasternal and genital shields coalesced, with 5 pairs of setae and 3 pairs of pores, separated by a suture from the expanded ventri-anal. Peritremal tube corrugated. Tectum with a long median apically trifurcate mucro. Female unknown.

Genotype *Antennolaelaps affinis* sp. nov.

Antennolaelaps affinis sp. nov.

Fig. 6 A-F

Description: Male Holotype—Oval, strongly chitinised and brown species. Length of idiosoma 494 μ , width 364 μ . Dorsal shield entire and underlapping on to venter from level of coxae IV backwards, with 23 pairs of setae to 2 μ long (mostly missing in both specimens), on the underlap posteriorly is one pair of setae to 59 μ long. Venter: tritosternum present and normal, its base inserted between the distinct pair of pre-endopodal shields; sternal, metasternal and genital shields coalesced, with three pairs of setae and three pairs of pores, separated from ventri-anal shield by a thin, straight suture on level of posterior margin of coxae IV; ventri-anal shield expanded behind coxae IV, triangular, not coalesced with the underlap of dorsal shield, with 7 pairs of setae besides the paranals which are very short; peritremal shield fairly narrow and posteriorly reaching to middle of coxae IV, stigma between coxae III and IV, the tube markedly corrugated and running on to the dorsum on level of coxae II. Legs long and slender, I 783 μ long, tactile, without caruncle and claws, tibia and tarsus with long, slender, fine setae; II 572 μ long, normal with caruncle and claws, femur with a strong subapical apophysis flanked by a small one, genu also with a similar small apophysis, setae on tarsus long and slender; III and IV to 515 μ and 936 μ respectively, with caruncle and claws and long, slender setae. Chelicerae as figured, fixed finger with 3 fairly strong teeth, movable finger with one tooth and a long, slender spermatophore carrier of its own length. Tectum as figured, with a peculiar median apically trident-like mucro flanked on each side by two or three teeth. Specialised seta on palpal tarsus 3-tined.

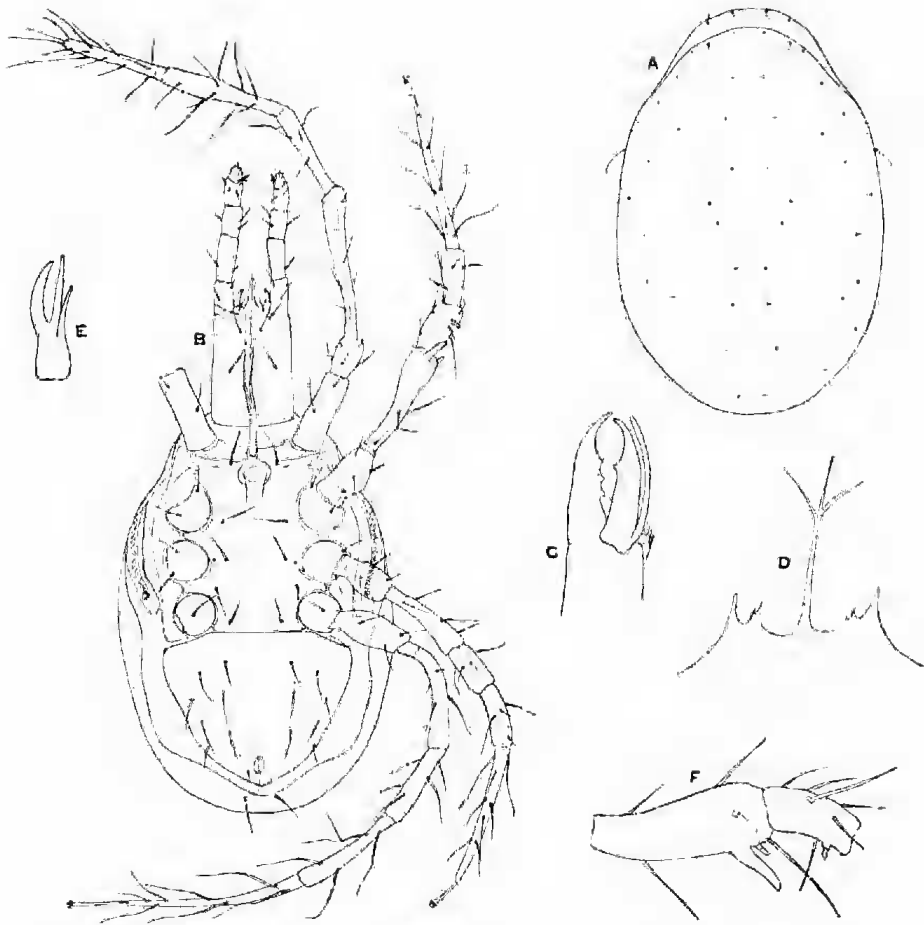


Fig. 6 A-F—*Antennolaclaps affinis* g. et sp. nov. Male: A. dorsum, B. ventral view, C. chelicerae, D. tectum, E. seta of palpal tarsus, F. femur and genu of leg I.

Female—Unknown.

Locality—The holotype and one paratype from litter from Brookfield, Queensland, 31st May to 10th June, 1949 (coll. E. R. Derrick).

Genus *STYLOGAMASUS* nov.

Neoparasitidae, near to *Hydrogamasus* but without metapodal shields, with sternal and metasternal shields coalesced, combined shield deeply excavate posteriorly. Dorsal shield entire, underlapping ventrally. Peritremal tube thick. Tectum trispinous.

Genotype *Stylogamasus convexa* sp. nov.

Stylogamasus convexa sp. nov.

Fig. 7 A-I

Description: Female Holotype—Shape of idiosoma sub-oval. Length of idiosoma 572μ , width 416μ . Dorsal shield entire, lightly reticulate, entirely covering the dorsum and underlapping narrowly to the margin of the ventrianal shield; furnished with 32 pairs of setae, the second and the humeral pairs and the three postero-median pairs of which are straight and strongly ciliated,

the rest simple and flagellate to 78μ long. Venter: tritosternum normal, a pair of pre-endopodal shields present; metasternal *cum* sternal shield longer than wide with 4 pairs of setae and 3 pairs of pores, the first two pairs of setae are ciliated, the others simple; genital shield as wide posteriorly as long, with punctate reticulations, with one pair of slightly ciliated setae, posterior margin separated only slightly from ventri-anal shield; ventri-anal shield as wide anteriorly as long with 6 pairs of ciliated setae to 65μ long in addition to the paranals; with imbricate markings; peritremal tube wide, running from between coxae III and

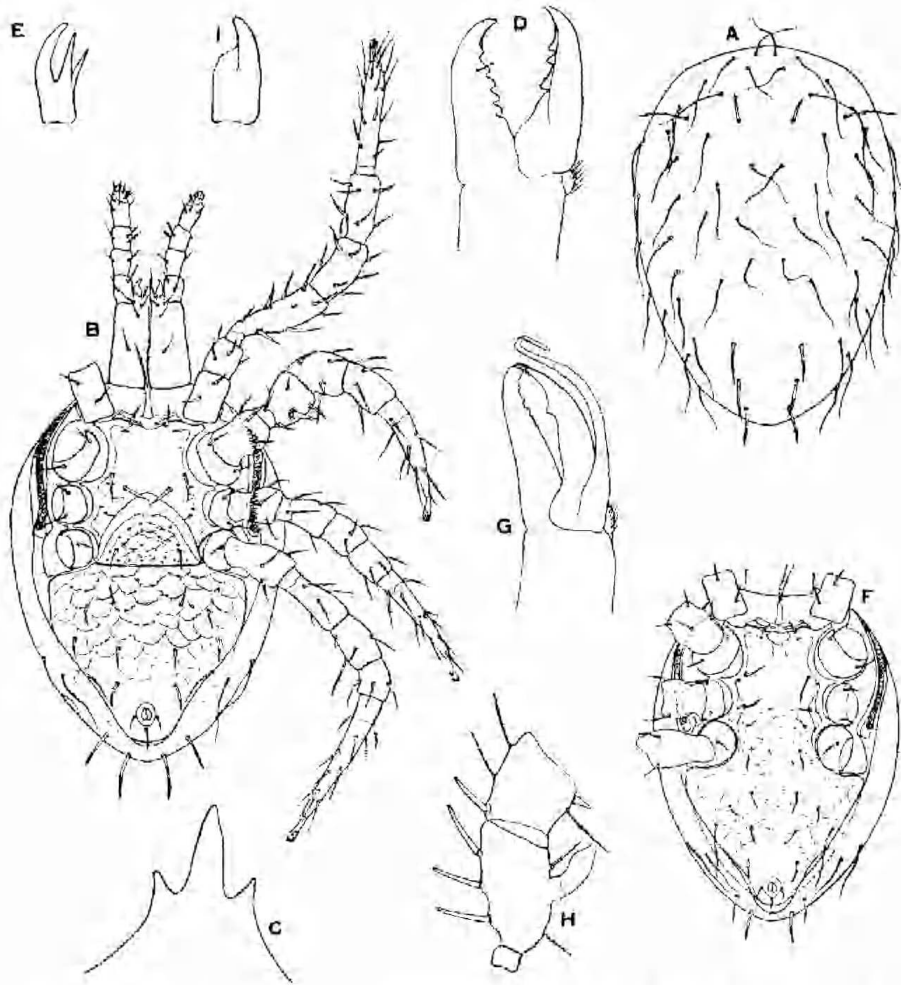


Fig. 7 A-I *Stylolaelaps convexa* g. et sp. nov. A-E Female: A. dorsum, B. ventral view, C. tectum, D. chelicerae, E. seta of palpal tarsus; F-I Male: F. venter, G. chelicerae, H. femur and genu of leg I, I. labial cornicle.

IV forwards to coxae I; exopodal shields fused but together separated from peritremal shield. Legs: I 624μ long, II 468μ , III 442μ , IV 559μ ; femur and genu of leg II each with a strong and stout spine-like seta. Chelicerae as figured, fixed finger with 5 fairly strong teeth and a simple seta, movable finger with 5 similar teeth. Tectum trispinous. Specialised seta on palpal tarsus 3-tined.

Male Allotype—Facies as in female. Length of idiosoma 455μ , width 364μ . Venter: pre-endopodal shields present; sternal, metasternal, genital and ventri-anal shields fused to form a single holovenral shield with 11 pairs of

setae, the metasternal pair short and simple to 20μ long, the postero-lateral two pairs simple and flagellate to 91μ , the rest short and ciliated to 32μ long. Legs: I 624μ long, II 468μ , III 390μ , IV 550μ ; femur of leg II with a large apophysis and three strong spines, genu with two strong spines. Chelicerae as figured, fixed finger with 5 small teeth, movable finger with one strong tooth and a short apically recurved spermatophore carrier. Tectum as in female.

Locality—Holotype female, allotype male and five paratype females from soil debris, Brookfield, Queensland, 31st May to 10th June, 1949 (coll. E. H. Derrick). In the collection of the South Australian Museum.

Family LAELAPTIDAE Berlese

Berlese, A., 1892. Acari, Myriapoda et Scorpiones ital. reperta; Mesostigmata: 30.

Subfamily HYPOASPIDINAE Vitzthum

Vitzthum, Graf H., 1941. In Bronn's Klass. u. Ordnungen, Bd. V, Abt. IV, Bb. 5.

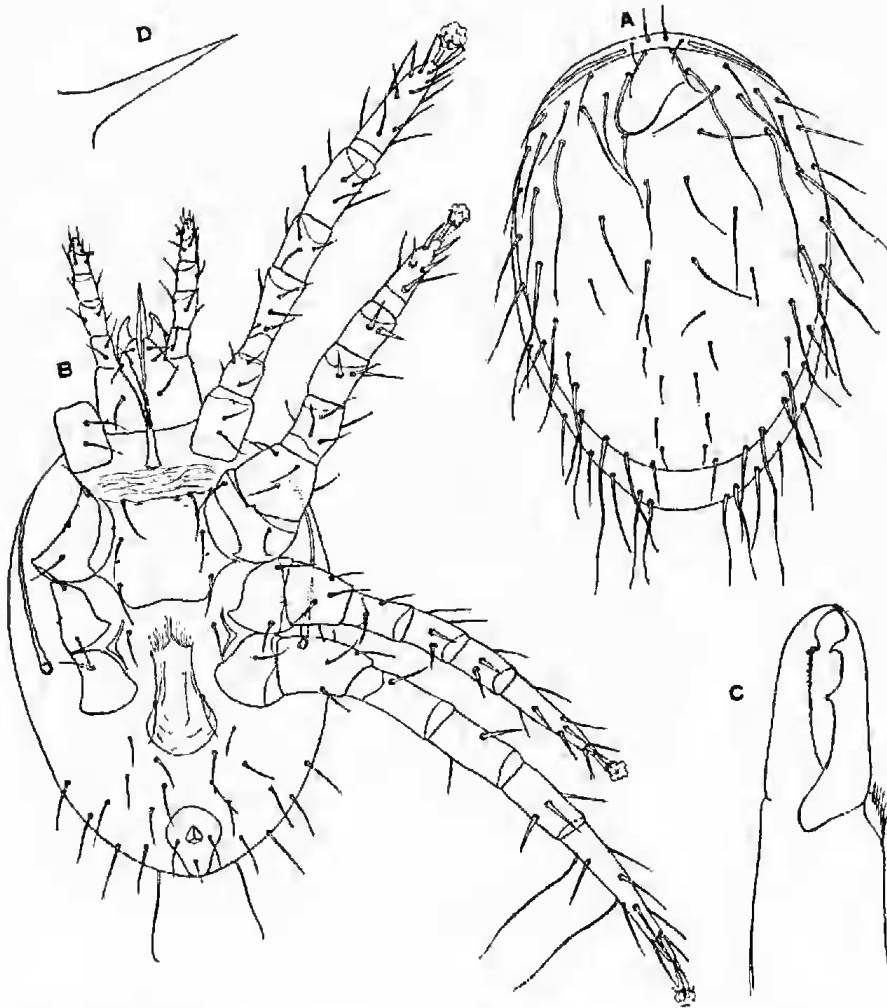


Fig. 8 A-D—*Coleolaelaps heteromychus* sp. nov. Female: A. dorsum, B. ventral view, C. chelicerae, D. tectum.

GENUS COLEOLAE LAP S Berlese

Berlese, A., 1914. Redia 10: 141. (Type *Laelaps (Iphis) agrestis* Berlese, 1887.)

Coleolaelaps heteronychus sp. nov.

Fig. 8 A-D

Description: Female Holotype—A fairly lightly chitinised species. Length of idiosoma 675μ , width 456μ . Dorsal shield entire, not completely covering dorsum, 585μ long by 416μ wide, with 34 pairs of short to long and very long, slender simple setae, the lateral and sublateral setae reaching to 247μ in length. Venter: tritosternum normal with ciliated lacinae; no pre-endopodal shields; sternal shield about as long as wide and extending posteriorly to middle of coxae III, with lightly incurved posterior margin, with 3 pairs of setae and 2 pairs of pores, metasternal shields represented only by the setae; genital shield flask-like in shape with one pair of setae and light reticulations, well separated from anal shield; anal shield pear-shaped with 3 paranal setae; laterad of the anal and genital shields there are 5 setae on each side and between these shields there are two pairs of setae. Peritreme long and slender with the stigma lying between coxae III and coxae IV, overlapping dorsally near coxae II. Legs fairly thick, only IV slightly longer than body; the setae on II-IV are rather stouter than on I; all tarsi with caruncle, claws and pad; I 624μ long, II 520μ , III 572μ , and IV 754μ . Chelicerae as figured, fixed finger with a subapical tooth followed by a series of minute rounded tuberculations, movable finger with two strong teeth the distance between which equals that between apex and first tooth. Tectum lancet-like as figured.

Male—Unknown.

Locality—From a "Black Beetle" *Heteronychus sanctae-helenae* M. Edw. Maclean, New South Wales, 11th Feb., 1954 (coll. A. M. Harvey).

Remarks—Described from the holotype and one paratype in the collection of the South Australian Museum.

Subfamily PHYTOSEIINAE Berlese

Berlese, A., 1916. Redia 12: 33.

GENUS PRIMOSEIUS nov.

Allied to *Lasioseius* Ber., subgenus *Zercoseius* Berl., but characterised therefrom by the sternal shield having only two pairs of setae, the third pair being on distinctly separated round shieldlets; the metasternal shields only represented by the setae.

Genotype *Lasioseius (Zercoseius) macauleyi* Hughes 1948.

To this genus will also belong *Lasioseius (Zercoseius) gracei* Hughes 1948. In her description of *macauleyi* Mrs. Hughes refers to the small shieldlets carrying the third pair of sternal setae as the metasternal shields, but according to Trägårdh's interpretation of the ventral shields of the Mesostigmata and their attendant setae, the fourth pair of setae are the metasternal setae and the small shields in front of these with the third pair of setae can only be parts of the sternal shield which have become separated.

Primoseius macauleyi (Hughes)

Fig. 9 A-E

Lasioseius (=Zercoseius) macauleyi A. M. Hughes, 1948. The Mites associated with stored products. H.M. Stationary Office, London, p. 146, fig. 112.

This species was described by Mrs. Hughes from sifted oats and detritus from warehouse floors in England and Northern Ireland.

A number of specimens which cannot be distinguished specifically from the original description and figures of *macauleyi* have recently been collected from bark scrapings of logs at Port Adelaide, South Australia, January, 1954. The

logs had been imported from Western Australia and the men handling them complained of biting and irritation. Whether or not the trouble was due to this particular species is not certain, however, for several other species of mites were also present in numbers, including *Typhlodromus cucumeris* Ouds., *Garrmania nesbitti* Wom., *Lasioseius* (Z.) *boomsmi* Wom. and *Tyrophagus castellanii* Hirst, the last being well-known as the cause of "copra itch".

The figures given in the present paper are drawn from the above Australian material.

Genus *TYPHLODRÖMUS* Scheuten

Scheuten, A., 1857. Arch. Naturgesch. 23: 111.

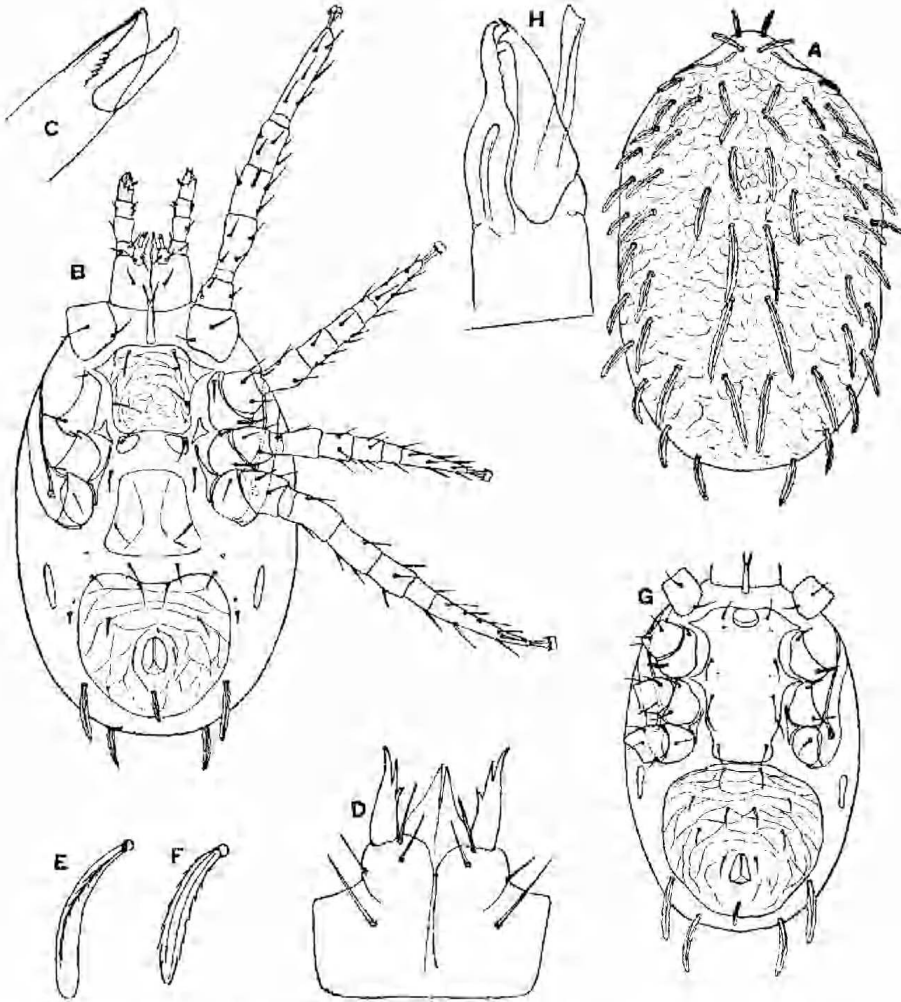


Fig. 9 A-H—*Primoseius macauleyi* (Hughes) A-F Female: A, dorsum, B, ventral view, C, chelicerae, D, labial cornicles, E, and F, two views of dorsal setae; G-H, Male: G, venter, H, chelicerae.

Typhlodromus cucumeris Oudemans

Fig. 10 A-C

Typhlodromus cucumeris Ouds., 1930, Ent. Ber., Anst. 8 (172): 69-70; Nesbitt, 1951, Zool. Verh. Leiden, No. 12: 23; Cunliffe and Baker, 1953, Pinellos Biol. Lab. Publ. No. 12: 15; Womersley, 1954, Aust. J. Zool. 2 (1): 175-6.

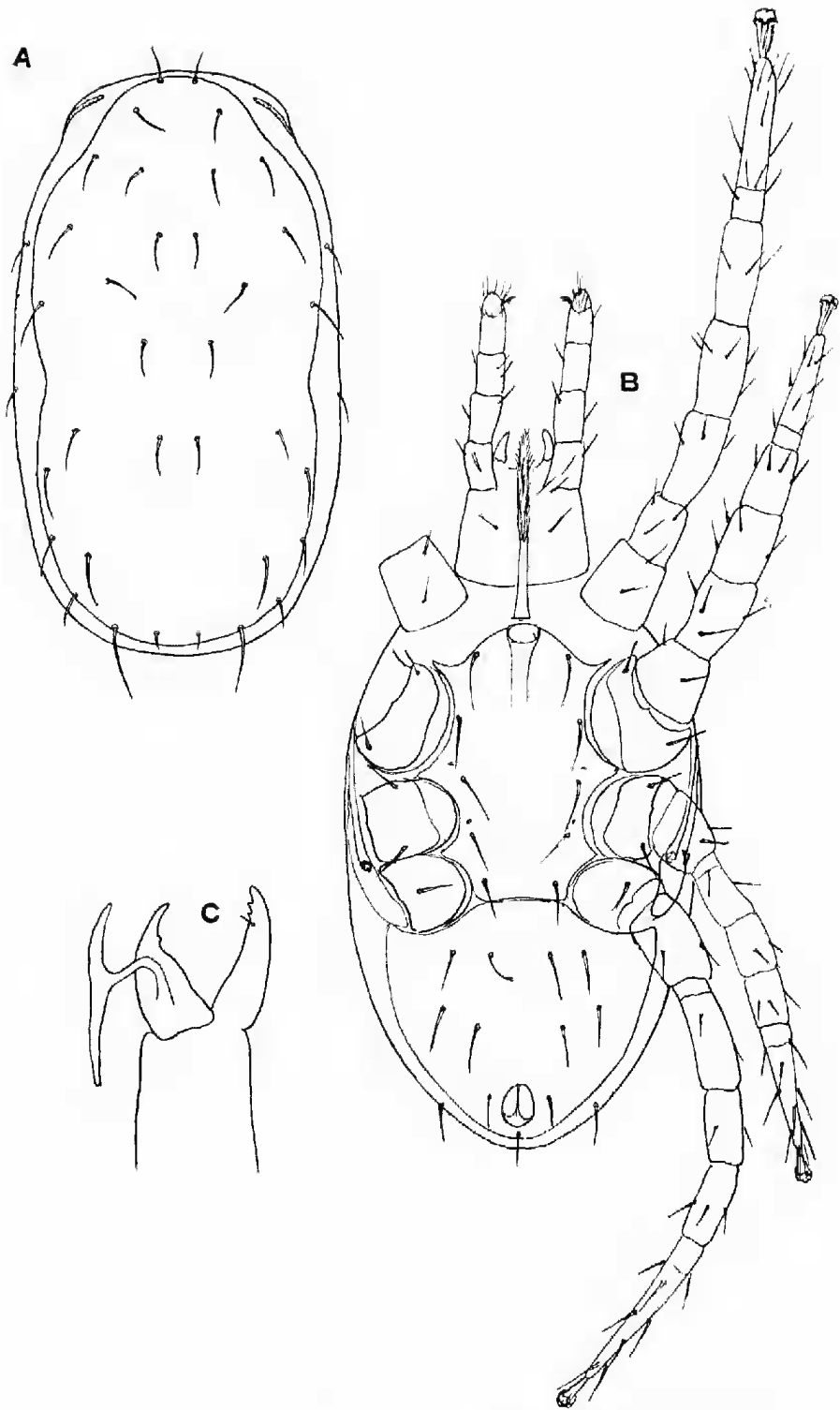


Fig. 10 A-C—*Typhlodromus cucumeris* Ouds. Male: A. dorsum, B. ventral view, C. chelicerae.

Description of Male Allotype—Facies generally as in female. Length of idiosoma 273μ , width 156μ . Dorsal shield lightly reticulated with setation as in female; D_1 14μ , D_2 14μ , D_3 14μ , D_4 17μ , D_5 17μ , D_6 8μ ; M_1 17μ , M_2 29μ ; L_1 20μ , L_2 17μ , L_3 17μ , L_4 22μ , L_5 20μ , L_6 20μ , L_7 17μ , L_8 14μ , L_9 36μ ; S_1 17μ , S_2 17μ . Venter: tritosternum but no pre-endopodal shields present; sternal, metasternal and genital shields coalesced with 5 pairs of setae and 3 pairs of pores; ventri-anal shield expanded behind coxae IV, with rounded sides and 4 pairs of setae besides the paranals as in the female. Chelicerae as figured, the movable finger with a peculiar T-shaped spermatophore carrier much as in *T.(N.) barkeri* Hughes, the cross bar of which is longer than the chela itself. Legs as in female, I 273μ long, II and III 195μ , and IV 273μ .

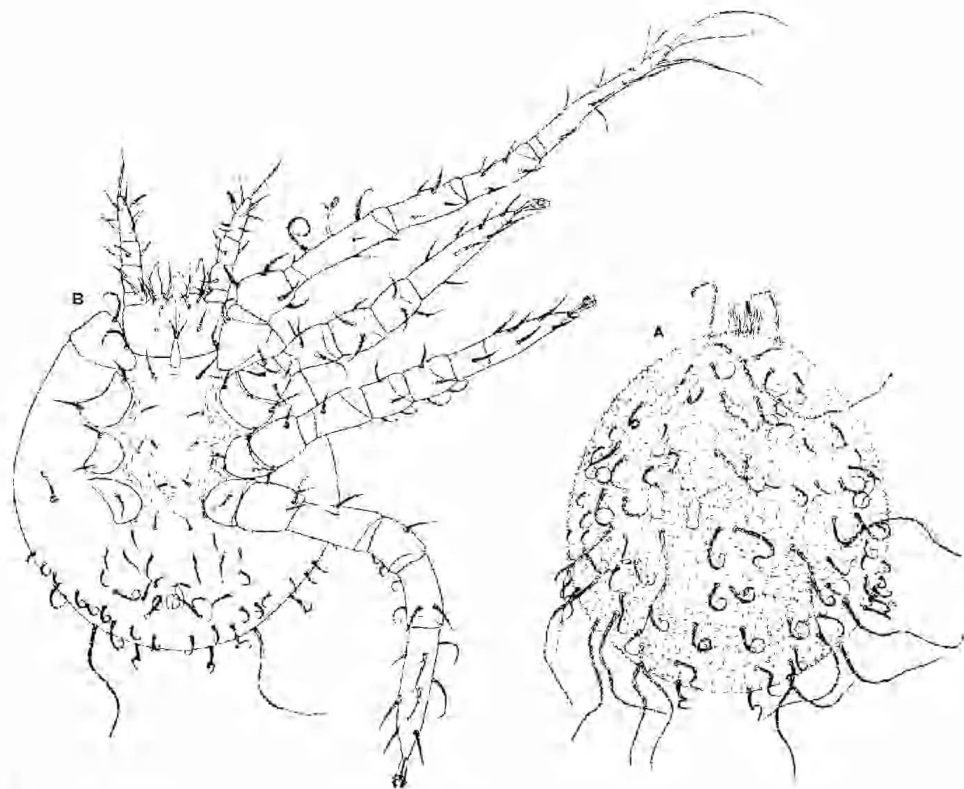


Fig. 11 A-B—*Derrickia setosa* Womersley Deutonymph: A. dorsum, B. ventral view.

Subfamily PODOCINTINAE Berlese

Berlese, A., 1916.

GENUS DERRICKIA Womersley

Womersley, H., 1956. Jour. Linn. Soc. London, Zool. XLII, No. 288.

Genotype *Derrickia setosa* Wom. (protonymph).

Description of Deutonymph—General facies as in the protonymph. Length of idiosoma 650μ , width 546μ . Dorsal shield entirely covering the dorsum with the setation as in the protonymph; the antero-median, postero-lateral and subpostero-lateral setae to 286μ long, surface with punctae which discally form an hexagonal pattern. A single eye on each side (in the protonymph this could not be seen). Venter: as in the protonymph, the sternal shield only indicated by discontinuity of the longitudinal striations, with 3 pairs of setae;

stigma weak and with only a short peritreme. Legs as in protonymph, I 1014 μ long, II 650 μ , III 650 μ , IV 715 μ .

Remarks—This genus and species was originally erected on a single specimen, a nymph, but the precise nymphal stage was not defined. The deutonymphal stage is now described from two specimens from litter from Brookfield, Queensland, 22nd May to 2nd July, 1949 (coll. E. H. Derrick). These specimens were at first taken to be adults, but it was later realised that they were deutonymphs and that the type specimen was a protonymph. The adults are as yet unknown.